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09/598,239	06/21/2000	Norman D. Geddes	ASI0001-US	7455
27510	7590	07/20/2004	EXAMINER	
KILPATRICK STOCKTON LLP 607 14TH STREET, N.W. WASHINGTON, DC 20005			IRSHADULLAH, M	
			ART UNIT	PAPER NUMBER
			3623	

DATE MAILED: 07/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/598,239

Applicant(s)

GEDDES ET AL.

Examiner

M. Irshadullah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 01/23/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This communication is in response to the amendments filed April 04, 2004.

#### ***Summary Of Instant Office Action***

2. Applicant's arguments regarding claims 1, 9, 10, 12-19, 23, 25 and 26 rejection under 35 U.S.C. 102 and claims 2-8, 11, 20-22 and 24 rejection under 35 U.S.C. 103, Office Action mailed October 03, 2003 have been fully considered and are moot in view of new ground of rejection.

#### ***Double Patenting***

##### **Statutory Double Patenting**

3. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

4. Claims 1-11 and 13-26 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-11, 14-27 of copending

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Application No. 09/598,750. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

### **Nonstatutory Double Patenting**

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

6. Claim 12 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 12 of copending Application No. 09/598,750. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to one of ordinary skill in the relevant art at the time of applicant's invention to include the limitation of claim 12 of the application 09/598,239 in place of claim 12 limitation in 09/598,750.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### **Claim Rejections - 35 USC § 101**

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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8. Claims 17-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

(1) whether the invention is within the technological arts; and

(2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts.

In the present case, claim 17 does not recite, apply or involve, use or advance the technological arts and does not produce a useful, concrete, and tangible result.

Claim 17 is, therefore rejected under U.S.C. 35 101, and similar reasoning holds for dependent claims 18-22.

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which

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said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 9, 10, 12-19, 23, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amado (US Patent 5,701,400) in view of Friedman et al (US Patent 5,995,959).

Amado teaches:

Claim 1. A supply chain management system comprising:

a) a knowledge base including expert knowledge about one or more business process domains (Col. 2, lines 52-65 recited with col. 21, lines 1-23, wherein cited expert systems are made up of cited human expertise or expert knowledge and rule base or knowledge base indicating that knowledge bases and expert knowledge are integral to each other or "knowledge bases and expert knowledge are inclusive", and reference's use for auditing companies' operations for evaluating or determining business unit goals, col. 21, lines 1-3, pointing to said expert system's relating to "plurality or one or more business performance or process units or domains");

c) a management system that collects and distributes data regarding one or more business processes and determines one or more goals (Col. 40, line 65 through col. 41, line 3, wherein reference's menu structure handling importing and exporting of data indicating reference's teaching a system for "handling or managing importing or collecting and exporting or distributing" data relating to above discussed business processes. Moreover, reference's use of for auditing business unit goals pointing to reference's "finding or determining unit goals");  
and

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d) a graphical user interface system that displays information regarding the one or more business processes (Col. 34, lines 38-45, wherein cited creating a powerful graphical user interface indicating availability of claimed "graphical user interface system" and a user would use the same for claimed purpose);

e) wherein the inference engine uses the partial order planner to determine a plan for achieving at least one of the one or more goals (See discussion about inference engine, determining goals in 1a) and 1c) above and discussion about partial order planner in 1b) below, and user would use said tools for claimed purpose);

In the following element:

b) an inference engine coupled to the knowledge base, the inference engine including a partial order planner.

Amado teaches:

inference engine coupled to knowledge base (Col. 2, lines 52-65, wherein inference engine being a building tool of expert knowledge and, as discussed above, expert knowledge is integral to knowledge base, said inference engine is integral or coupled to knowledge base).

Amado does not explicitly teach:

partial order planner.

However, Friedman et al teach the same (Col. 16, lines 17-25, wherein reference's being partial order planner indicating reference's employing it's methods as partial order planner. While Amado relating to AI, decision support

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application and expert systems for auditing a company's business unit goals, Friedman et al teach a method or partial order planner for solving users' queries relating to a business object, such as price of domestic and foreign cars. The references are analogous.

It would have been obvious to one of ordinary skill in the relevant arts at the time of applicant's invention to incorporate Friedman et al's features into Amado's invention, thereby entailing a system enabling a user to handle partial goal satisfaction.

Claim 9. The system of claim 1, wherein the knowledge base includes one or more scripts, each of the one or more scripts comprising a sequence of fully or partially specified actions (Amado: Col. 12, line 60 through col. 12, line 4, wherein using script language indicating reference's teaching "scripts" and scripts have "action instructions or sequence of fully or partially specified actions" and a user would store said scripts into above discussed knowledge base).

Claim 10. The system of claim 1, wherein the inference engine includes an intent interpreter (Amado: Col. 2, lines 52-65, wherein inference engine providing mechanism for interpreting rules indicating reference's teaching the claimed limitation).

Claim 12. The system of claim 1, wherein the knowledge base includes tables of data, each table storing zero or more data records (Friedman et al: Fig.



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2 {28-30}, col. 8, lines 48-50, wherein information sources 28-30 being knowledge bases are indeed databases of knowledge storing data in some format including tabular format and tables would comprise no {zero} data or plurality of entries or records and see motivation in applicant's claim 1b) above).

Claim 13. The system of claim 12, further comprising a data security mechanism that protects data stored in the knowledge base (Inherent, since it is an essential requisite in database environment).

Claim 14. The system of claim 13, wherein the data security mechanism maintains an access control list for one or more tables in the knowledge base (Inherent, since not all users have same access privilege, for instance examiner and Supervisor and Director have access privilege in accordance their status or level).

Claim 15. The system of claim 14, wherein the data security mechanism maintains an access control list for one or more data records in the knowledge base (Inherent, keeping or maintaining the matrices or list of access privilege or control is the basic way).

Claim 16. The system of claim 1, wherein the partial order planner is a least commitment planner (Friedman et al: Col. 16, lines 22-25, wherein recitation of "sound, complete, free of threats" inferring "commitment

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encompassing lowest or least commitment and see motivation in applicant's claim 1b) above).

Claim 17. A method for conducting supply chain management, the method comprising:

a) determining a goal for a supply chain participant (Amado: Col. 21, lines 1-23, wherein auditing company's operation for finding business units goals indicating evaluating or determining business units goals and company encompassing supply chain, business units encompassing partners or participants thereof); and

b) using a knowledge base to create a plan for meeting the determined goal (See discussion of knowledge base in applicant's claim 1a) and discussion about determining goals in 1e) above).

Claim 18. The method of claim 17, wherein the act of determining a goal for a supply chain participant and creating a plan for meeting the goal is performed using a partial order planner (Friedman et al: Col. 16, lines 17-26, wherein cited partial order planner is employed for claimed purpose as discussed above and see motivation in applicant's claim 1b) above).

Claim 19. The method of claim 18, wherein the partial order planner is a least commitment planner (See discussion of applicant's claim 16 above).

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Claim 23. A supply chain management system comprising:

a) a plurality of intelligent agents (Amado: Col. 1, lines 30-41, wherein reference's use of intelligent databases, intelligent user interfaces and automated discovering tools, such as database miners indicating availability of functions performing automated actions or functions as "intelligent agents), each of the plurality of intelligent agents including:

b) a knowledge base including expert knowledge about one or more business process domains (See discussion of applicant's claim 1a) above);

c) an inference engine coupled to the knowledge base, the inference engine including a partial order planner (See discussion of applicant's claim 1b) above);

d) a data management system that collects and distributes data regarding one or more business processes (See discussion of applicant's claim 1c) above); and

e) a graphical user interface system that displays information regarding the one or more business processes (See discussion of applicant's claim 1e) above).

Claim 25. The supply chain management system of claim 24, wherein each agent of the plurality of intelligent agents determines the intentions of one or more users and wherein the data management system of a first agent of the plurality of intelligent agents shares data with a second agent of the plurality of intelligent agents representing the determined intentions of the one or more

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users to facilitate collaboration (See discussion of applicant's claims 23a) and 10 above and a user would employ cited intelligent agents for finding or determining intents using intent interpreter of the claim 10).

Claim 26. The supply chain management system of claim 25, wherein the system uses the shared data to automatically detect conflicts between the one or more users (Friedman et al: Col. 14, lines 22-30, wherein "executing the same operator twice not returning new tuples-lines 26-29" inferring availability of a function which checks for or detects duplication or conflict and see motivation in claim 1b) above).

11. Claims 2-4, 6-8, 21-22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amado (US Patent 5,701,400) in view of Banks et al's Pilot's Associate, 1991.

In the following claims:

{Claim 2. The system of claim 1, wherein the knowledge base includes one or more plan-goal graphs.

Claim 3. The system of claim 1, wherein the knowledge base includes one or more concept graphs.}

Amado teaches:

knowledge base (as discussed above).

Amado does not explicitly teach:

"plan-goal graph" and "concept graph".

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However, Banks et al teach the same (Fig. 1, page 19, col. 3, lines 48-50 and page 23, col. 1, lines 25-28). While Amado relating to AI, decision support application and expert systems for auditing a company's business unit goals, Banks et al's method relates to pilots, yet its application to various other endeavors such as commerce including supply chain is within the scope as indicated by "The technology of Pilot's Associate can be applied across a broad spectrum of applications. In particular real time, interactive process control applications are likely candidates-page 29, col. 1, lines 11-15". Both are analogous.

It would have been obvious to one of ordinary skill in the business art at the time of applicant's invention to incorporate Banks et al's graphs into Amado's invention, thereby achieving a real time interactive process control applications which is a dire desire and need of business endeavors.

Claim 4. The system of claim 3, wherein the inference engine creates one or more plan instances (Amado: Col. 2, lines 52-65, wherein a user would employ or use cited inference engine to generate or create "plans or one or more instances thereof).

Claim 6. The system of claim 4, wherein the inference engine manages life cycle states of the one or more plan instances according to a commitment level of the partial to order planner (Amado: Col. 2, lines 52 through col. 3, line 3. Moreover, "commitment strategies are known since 1991 (Friedman

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et al: col. 18, {19} lines 40-42), inclusion of which is considered inherent at the time of applicant's invention).

In the following claim:

Claim 7. The system of claim 6, wherein the inference engine manages monitoring of the situation using the one or more concept graphs according to the life cycle states of the one or more plan instances.

Amado teaches:

inference engine, monitoring and life cycle states (as discussed above).

Amado does not explicitly teach:

concept graphs

However, Banks et al teach (Page 23, col. 1, lines 25-28). Although, Banks et al's method relates to pilots, yet its application to various other endeavors such as commerce including supply chain is within the scope as indicated by "The technology of Pilot's Associate can be applied across a broad spectrum of applications. In particular real time, interactive process control applications are likely candidates-page 29, col. 1, lines 11-15". While Amado relating to AI, decision support application and expert systems for auditing a company's business unit goals, Banks et al teach knowledge based system application for enabling users to make decisions. Both are analogous.

It would have been obvious to one of ordinary skill in the business art at the time of applicant's invention to incorporate Banks et al's concept graphs into Friedman

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et al's invention, thereby achieving a real time interactive process control applications which is a dire desire and need of business endeavors.

Claim 8. The system of claim 7, wherein the inference engine determines what further processing is needed by the partial order planner based on the monitoring of the situation (Amado: Col. 2, lines 52-65, wherein a user would use cited inference engine for claimed purpose).

Claim 21. The method of claim 17, wherein the knowledge base includes one or more plan-goal graphs (See discussion of claim 2 above).

Claim 22. The method of claim 17, wherein the knowledge base includes one or more concept graphs (See discussion of claim 3 above).

Claim 24. The supply chain management system of claim 23, wherein the knowledge base includes one or more concept graphs (See discussion of applicant's claims 1a) and 7 above).

12. Claims 11 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amado (US Patent 5,701,400) in view of Shasha (US Patent 5,809,212).

In the following claims:

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{Claim 11. The system of claim 1, wherein the inference engine includes a non-monotonic truth maintenance system.

Claim 20. The method of claim 17, wherein the act of determining a goal for a supply chain participant is performed using a non-monotonic truth maintenance system}.

Amado teaches:

the inference engine, claim 11 and determining a goal, claim 20 (As discussed above).

Amado does not teach:

non-monotonic truth maintenance system.

However, Shasha teaches the same (Col. 3, lines 38-42). Friedman et al and Shasha both employ AI procedures to solve problems relating to various commercial areas or domains. While Amado relating to AI, decision support application and expert systems for auditing a company's business unit goals, Shasha teaches non-monotonic truth maintenance system.

It would have been obvious to one of ordinary skill in the relevant art at the time of applicant's invention to incorporate Shasha's feature into Friedman et al's invention, thereby providing a system for an improved representation of networks of facts, belief and expectations so that a user would acquire qualified statements of knowledge from the system as desired.



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13. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amado (US Patent 5,701,400) in view of Banks et al's Pilot's Associate and further in view of Shasha (US Patent 5,809,212).

In the following claim:

Claim 5. The system of claim 3, wherein at least one of the one or more concept graphs includes a non-monotonic model of economic benefit provided by the plan instances created by the inference engine.

Amado teaches:

plan instances created by the inference engine (As discussed above), and Banks et al teach:

concept graphs (As discussed above).

Both Amado and Banks et al do not teach:

non-monotonic model.

However, Shasha teaches the same (Col. 3, lines 38-42, said non-monotonic truth maintenance system inferring non-monotonic modeling or model). While Amado relating to AI, decision support application and expert systems for auditing a company's business unit goals, Banks et al's Pilot Associate system or method is applicable in broad spectrum of applications (page 23, col. 1, lines 11-15) and Shasha teaches non-monotonic truth maintenance system.

It would have been obvious to one of ordinary skill in the relevant art at the time of applicant's invention to incorporate Shasha's feature into the combination of Banks et al Friedman et al's invention, thereby providing a system for an interactive process entailing improved representation of networks of facts, belief

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and expectations so that a user would acquire qualified statements of knowledge from the system as desired in real time.

### ***Response to Arguments***

14. Applicant's arguments filed April 05, 2004 have been fully considered and are moot in view of new ground of rejection.

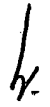
### ***Conclusion***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Irshadullah whose telephone number is 703-308-6683. The examiner can normally be reached on 10:00 a.m. to 6:00 p.m..

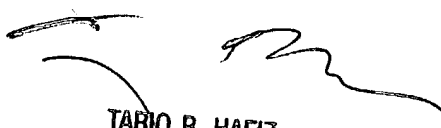
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 703-305-9643. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



M. Irshadullah  
July 06, 2004



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